

WATER RESISTANT CATALYST FOR THE
PRODUCTION OF DIPHENYLCARBONATE VIA
THE DIRECT CARBONYLATION OF PHENOL

ABSTRACT OF THE DISCLOSURE

[0036] A method of increasing the amount of diphenylcarbonate produced per amount of catalyst consumed in a phenol carbonylation process is described. Phenolic carbonylation produces water as a reaction product which reduces the turnover number (TON) of the catalyst. A mixture of a phenolic precursor, a base containing catalyst and co-catalyst components and at least one chemical additive comprising a halide or hydroxide of alkali metal or alkaline earth metal when carbonylated together under specific conditions increases the turnover number (TON) and water resistivity of a palladium catalyst. The metal halide likely makes the catalyst less susceptible to degradation by water hence increasing the reaction yield per weight of catalyst consumed.